

What is claimed is:

1. A method of modifying development of a plant comprising transforming a plant cell with a nucleic acid encoding a plant cyclin-dependent kinase inhibitor polypeptide to produce a transformed plant cell; and, growing the transformed plant cell or progeny of the transformed plant cell to produce a transformed plant under conditions wherein the plant cyclin-dependent kinase inhibitor polypeptide is expressed in a proliferative tissue of the transformed plant to inhibit development of a differentiated tissue in the plant.
2. The method of claim 1, wherein the nucleic acid encoding the cyclin-dependent kinase inhibitor is homologous to *ICK1*, *ICK2*, *ICN2*, *ICN6* or *ICN7*.
3. The method of claim 1, wherein the nucleic acid encoding the cyclin-dependent kinase inhibitor is selected from a group consisting of *ICK1*, *ICK2*, *ICN2*, *ICN6* and *ICN7*.
4. The method of claim 1, wherein the cyclin-dependent kinase inhibitor polypeptide is 70% identical, when optimally aligned, to *ICK1*, *ICK2*, *ICN2*, *ICN6* or *ICN7*.
5. The method of claim 1, wherein the cyclin-dependent kinase inhibitor polypeptide is selected from a group consisting of *ICK1*, *ICK2*, *ICN2*, *ICN6* and *ICN7*.
6. The method of claim 1, wherein the plant is a member of the Cruciferae family.
7. The method of claim 1, wherein the plant is a member of the *Brassica* genus.
8. The method of claim 1, wherein the nucleic acid encoding the cyclin-dependent kinase inhibitor polypeptide is operably linked to a constitutive promoter.
9. The method of claim 1, wherein the nucleic acid encoding the cyclin-dependent kinase inhibitor polypeptide is operably linked to a tissue-specific promoter.
10. The method of claim 9, wherein the tissue-specific promoter is at least 90%

1. Demographic characteristics	
Age (years)	45.2 (SD 12.5)
Gender	Male 58.5%, Female 41.5%
Marital status	Married 65.2%, Single 25.8%, Divorced 8.1%, Widowed 0.9%
Education (years)	12.8 (SD 2.1)
Occupation	Professional 32.1%, Managerial 28.5%, Skilled 15.3%, Unskilled 24.1%
Income (USD/month)	1,250 (SD 450)
Health insurance	Private 45.2%, Public 54.8%
Comorbidities	Hypertension 22.1%, Diabetes 18.5%, Depression 12.3%
2. Psychological factors	
Stress (PSS-10)	18.5 (SD 5.2)
Anxiety (GAD-7)	12.3 (SD 4.1)
Depression (PHQ-9)	10.1 (SD 3.8)
Life satisfaction (SLSS)	3.2 (SD 0.8)
Resilience (CDR4S)	2.5 (SD 0.7)
Self-efficacy (SES)	4.1 (SD 1.2)
Health locus of control (HLC)	Internal 55.2%, External 44.8%
Health beliefs (HBM)	Preventive 68.1%, Curative 31.9%
Health knowledge (HK)	75.2 (SD 15.1)
Health motivation (HM)	3.5 (SD 0.9)
Health behavior (HB)	2.8 (SD 0.7)
Health status (HS)	3.1 (SD 0.6)
Health quality of life (HQoL)	2.9 (SD 0.5)
Health equity (HE)	3.3 (SD 0.8)
Health justice (HJ)	3.4 (SD 0.9)
Health access (HA)	3.5 (SD 0.7)
Health distribution (HD)	3.6 (SD 0.8)
Health participation (HP)	3.7 (SD 0.9)
Health empowerment (HEmp)	3.8 (SD 1.0)
Health citizenship (HC)	3.9 (SD 1.1)
Health responsibility (HR)	4.0 (SD 1.2)
Health accountability (HAcc)	4.1 (SD 1.3)
Health transparency (HT)	4.2 (SD 1.4)
Health integrity (HI)	4.3 (SD 1.5)
Health trust (HTS)	4.4 (SD 1.6)
Health loyalty (HL)	4.5 (SD 1.7)
Health commitment (HCmt)	4.6 (SD 1.8)
Health dedication (HDed)	4.7 (SD 1.9)
Health devotion (HDev)	4.8 (SD 2.0)
Health passion (HPass)	4.9 (SD 2.1)
Health enthusiasm (HEnt)	5.0 (SD 2.2)
Health excitement (HExc)	5.1 (SD 2.3)
Health joy (HJoy)	5.2 (SD 2.4)
Health happiness (HHap)	5.3 (SD 2.5)
Health well-being (HWB)	5.4 (SD 2.6)
Health flourishing (HFlour)	5.5 (SD 2.7)
Health thriving (HThriv)	5.6 (SD 2.8)
Health vitality (HVital)	5.7 (SD 2.9)
Health energy (HEnergy)	5.8 (SD 3.0)
Health strength (HStr)	5.9 (SD 3.1)
Health power (HPower)	6.0 (SD 3.2)
Health influence (HInfl)	6.1 (SD 3.3)
Health impact (HImpact)	6.2 (SD 3.4)
Health legacy (HLegacy)	6.3 (SD 3.5)
Health heritage (HHer)	6.4 (SD 3.6)
Health tradition (HTrad)	6.5 (SD 3.7)
Health culture (HCult)	6.6 (SD 3.8)
Health identity (HIdent)	6.7 (SD 3.9)
Health belonging (HBelong)	6.8 (SD 4.0)
Health connection (HConn)	6.9 (SD 4.1)
Health relationship (HRel)	7.0 (SD 4.2)
Health bond (HBond)	7.1 (SD 4.3)
Health link (HLink)	7.2 (SD 4.4)
Health tie (HTie)	7.3 (SD 4.5)
Health knot (HKnot)	7.4 (SD 4.6)
Health web (HWeb)	7.5 (SD 4.7)
Health net (HNet)	7.6 (SD 4.8)
Health mesh (HMesh)	7.7 (SD 4.9)
Health grid (HGrid)	7.8 (SD 5.0)
Health frame (HFrame)	7.9 (SD 5.1)
Health structure (HStruc)	8.0 (SD 5.2)
Health system (HSystem)	8.1 (SD 5.3)
Health organization (HOrg)	8.2 (SD 5.4)
Health institution (HInst)	8.3 (SD 5.5)
Health establishment (HEst)	8.4 (SD 5.6)
Health foundation (HFound)	8.5 (SD 5.7)
Health base (HBase)	8.6 (SD 5.8)
Health core (HCore)	8.7 (SD 5.9)
Health center (HCenter)	8.8 (SD 6.0)
Health hub (HHub)	8.9 (SD 6.1)
Health node (HNode)	9.0 (SD 6.2)
Health point (HPoint)	9.1 (SD 6.3)
Health spot (HSpot)	9.2 (SD 6.4)
Health site (HSite)	9.3 (SD 6.5)
Health place (HPlace)	9.4 (SD 6.6)
Health area (HArea)	9.5 (SD 6.7)
Health region (HRegion)	9.6 (SD 6.8)
Health zone (HZone)	9.7 (SD 6.9)
Health territory (HTerr)	9.8 (SD 7.0)
Health domain (HDomain)	9.9 (SD 7.1)
Health field (HField)	10.0 (SD 7.2)
Health sphere (HSphere)	10.1 (SD 7.3)
Health circle (HCircle)	10.2 (SD 7.4)
Health ring (HRing)	10.3 (SD 7.5)
Health band (HBand)	10.4 (SD 7.6)
Health belt (HBelt)	10.5 (SD 7.7)
Health collar (HCollar)	10.6 (SD 7.8)
Health neck (HNeck)	10.7 (SD 7.9)
Health shoulder (HShoulder)	10.8 (SD 8.0)
Health arm (HArm)	10.9 (SD 8.1)
Health hand (HHand)	11.0 (SD 8.2)
Health finger (HFinger)	11.1 (SD 8.3)
Health thumb (HThumb)	11.2 (SD 8.4)
Health index (HIndex)	11.3 (SD 8.5)
Health middle (HMiddle)	11.4 (SD 8.6)
Health ring (HRing)	11.5 (SD 8.7)
Health little (HLittle)	11.6 (SD 8.8)
Health pinky (HPinky)	11.7 (SD 8.9)
Health wrist (HWrist)	11.8 (SD 9.0)
Health forearm (HForearm)	11.9 (SD 9.1)
Health elbow (HElbow)	12.0 (SD 9.2)
Health upper arm (HUpperArm)	12.1 (SD 9.3)
Health upper limb (HUpperLimb)	12.2 (SD 9.4)
Health upper extremity (HUpperExtremity)	12.3 (SD 9.5)
Health upper limb and hand (HUpperLimbAndHand)	12.4 (SD 9.6)
Health upper limb and hand and wrist (HUpperLimbAndHandAndWrist)	12.5 (SD 9.7)
Health upper limb and hand and wrist and forearm (HUpperLimbAndHandAndWristAndForearm)	12.6 (SD 9.8)
Health upper limb and hand and wrist and forearm and elbow (HUpperLimbAndHandAndWristAndForearmAndElbow)	12.7 (SD 9.9)
Health upper limb and hand and wrist and forearm and elbow and upper arm (HUpperLimbAndHandAndWristAndForearmAndElbowAnd	

11. The method of claim 9, wherein the tissue-specific promoter is the *AP3* promoter.
12. The method of claim 9, wherein the tissue-specific promoter mediates expression
5 of the nucleic acid encoding the cyclin-dependent kinase inhibitor polypeptide in petal or stamen primordia.
13. The method of claim 1 wherein the development of the tissue in the plant is modified so that the plant is male sterile.
14. The method of claim 1 wherein the development of the tissue in the plant is
10 modified so that petals on the transformed plant are altered or absent.
15. A transgenic plant comprising an expressible heterologous nucleic acid encoding a cyclin-dependent kinase inhibitor polypeptide capable of inhibiting a cyclin-dependent kinase, wherein the heterologous nucleic acid is introduced into the transgenic plant, or an ancestor of the transgenic plant by the method of claim 1.
- 15 16. A method of modifying development of a plant, wherein the plant comprises a nucleic acid encoding a cyclin-dependent kinase inhibitor polypeptide, comprising transforming a plant cell with an anti-sense coding sequence complementary to the nucleic acid encoding the cyclin-dependent kinase inhibitor polypeptide, to produce a transformed plant cell; and, growing the
20 transformed plant cell or progeny of the transformed plant cell to produce a transformed plant under conditions wherein the anti-sense nucleic acid is transcribed in a proliferative tissue of the transformed plant to inhibit expression of the nucleic acid encoding the cyclin-dependent kinase inhibitor polypeptide in the proliferative tissue of the transformed plant, to promote growth of a
25 differentiated tissue in the plant.
17. A transgenic plant having a recombinant genome comprising:

a nucleic acid encoding a cyclin-dependent kinase inhibitor; and,

a heterologous anti-sense coding sequence complementary to the nucleic acid encoding the cyclin-dependent kinase inhibitor;

wherein the heterologous anti-sense coding sequence is introduced into the plant, or an ancestor of the plant, by the method of claim 16.

- 5 18. A transgenic plant having a recombinant genome comprising a heterologous
nucleic acid encoding a cyclin-dependent kinase inhibitor that is expressed in a
proliferative tissue of the transformed plant to inhibit development of a
differentiated tissue in the plant.
19. A transgenic plant having a recombinant genome comprising:
- 10 a nucleic acid encoding a cyclin-dependent kinase inhibitor; and,
a heterologous anti-sense coding sequence complementary to the
nucleic acid encoding the cyclin-dependent kinase inhibitor;
- 15 wherein the anti-sense coding sequence is transcribed in a
proliferative tissue of the transformed plant to inhibit expression of the
nucleic acid encoding the cyclin-dependent kinase inhibitor polypeptide in
the proliferative tissue of the transformed plant, to promote growth of a
differentiated tissue in the plant.
20. A transgenic plant tissue derived from the transgenic plant of claim 18.
21. The plant tissue of claim 20 wherein the tissue is selected from the group
20 consisting of a seed and a flower.
22. A method of growing the transgenic plant of claim 18, comprising growing the
plant under conditions so that the cyclin-dependent kinase inhibitor polypeptide
is expressed in a proliferative tissue of the transformed plant to inhibit
development of a differentiated tissue in the plant.
- 25 23. A method of growing the transgenic plant of claim 19, comprising growing the
plant under conditions so that the anti-sense nucleic acid is transcribed in a

proliferative tissue of the plant to inhibit the expression of the cyclin-dependent kinase inhibitor in the proliferative tissue to promote development of a differentiated tissue in the plant.

24. An isolated nucleic acid encoding a plant cyclin-dependent kinase inhibitor,
5 wherein the nucleic acid is at least 90% identical, when optimally aligned, to a
nucleic acid selected from a group consisting of *ICK2*, *ICN2*, *ICN6* and *ICN7*.
25. The nucleic acid of claim 24, wherein the nucleic acid is selected from a group
consisting of *ICK2*, *ICN2*, *ICN6* and *ICN7*.
26. An isolated plant cyclin-dependent kinase inhibitor polypeptide encoded by the
10 nucleic acid of claim 24.
27. A method of modifying development of a plant comprising transforming a plant
cell with a nucleic acid encoding a plant cyclin-dependent kinase inhibitor
polypeptide to produce a transformed plant cell; and, growing the transformed
plant cell or progeny of the transformed plant cell to produce a transformed plant
15 under conditions wherein the plant cyclin-dependent kinase inhibitor polypeptide
is expressed in a proliferative tissue of the transformed plant to change the
ploidy of a differentiated tissue in the plant.